

**REMARKS AND ARGUMENTS**

Entry of the foregoing amendments and reconsideration of this application is respectfully requested. Claims 1, 31, 32 and 48-52 have been amended such that all these claims are in condition for allowance.

**Claim Objections**

Claim 31 has been amended per the Examiner's suggestion. The word "if" has been changed to "of", correcting a typographical error which was the basis of the Examiner's objection.

**Double Patenting**

Claims 1 and 31 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 30 of U.S. Patent No. 6,762,661. Although Applicant does not agree with the rejection, a terminal disclaimer in compliance with 37 CFR 1.321(c) has been filed to expedite allowance of the claims.

**Claim Rejections - 35 U.S.C. 102**

The Examiner has rejected claims 1, 31 and 32 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,504,575 to Stafford (hereinafter "Stafford"). It is well settled that "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference."

Verdegaal Bros. v. Union Oil Co. of California, 2  
U.S.P.Q.2d. 1051, 1053 (Fed. Cir. 1987).

Although Applicant does not agree with the Examiner's rejection of claims 1, 31 and 32, and specifically do not agree that each and every element as set forth in these claims is found in the Stafford. However, to expedite allowance of these claims they have been amended to more accurately describe the invention as disclosed in the specification.

Claim 1

Applicants' amended claim 1 reads as follows:

A shutter switch for an electromagnetic wave millimeter beam, comprising:

a plurality of waveguides adapted to receive at least part of an electromagnetic millimeter beam, said waveguides being adjacent to one another with their longitudinal axes aligned with the propagation of said beam said waveguides switchable to either transmit or block transmission of their respective portions of said beam.

Claim 1 requires that the plurality of waveguides are "adapted to receive at least part of an electromagnetic millimeter beam." A millimeter beam describes an electromagnetic beam with a frequency exceeding approximately 100GHz. Stafford teaches an SLM spectrometer that is used to analyze visible light or light that is near visible. (See Stafford: col. 2, lines 8-11). Visible light and near visible light have frequencies on the order of 500THz (around 600nm).

Electromagnetic waves in this range are not millimeter beams. Therefore, Stafford does not teach the use of millimeter beams in the SLM spectrometer as required by Applicant's claim 1. Applicant submits that Stafford does not teach, disclose or suggest all of the limitations of claim 1.

Claim 31

Applicant's amended claim 31 reads as follows:

A millimeter beam transmission system, comprising;  
an electromagnetic beam transmitter;  
an electromagnetic beam receiver;  
a shutter switch positioned in the path of ~~said~~  
a millimeter beam between said transmitter and receiver, said shutter switch comprising at least one waveguide positioned to receive at least part of said millimeter beam, the longitudinal axis of each if said waveguides aligned with the propagation of said beam, each of said waveguide being switchable to either transmit or block transmission of its respective portion of said millimeter beam.

Similarly to claim 1, Applicant's claim 31 requires "a shutter switch positioned in the path of a *millimeter* beam." Stafford teaches a system for analyzing visible and near visible light. Applicant submits that Stafford does not teach, suggest or disclose all of the limitations of claim 31.

Claim 32

Applicant's amended claim 32 reads as follows:

The system of claim 31, wherein said beam transmitter comprises a radiating element for generating a electromagnetic millimeter signal and a first lens positioned to collimate at least part of said millimeter signal into a beam, and said ~~receive~~ receiver comprises [[a]] an electromagnetic receiving element and a second lens positioned to focus said beam to said receiving element, said shutter switch positioned between said first and second lenses.

Claim 32 requires a *millimeter* beam, a feature that is not taught, suggested or disclosed in Stafford which uses a visible or near visible light beam.

Claim 48

The Examiner has rejected claim 48 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,526,172 to Kanack (hereinafter "Kanack").

Although Applicant does not agree with the Examiner's rejection of claim 48, the claim has been amended to more accurately describe the invention as disclosed in the specification. Applicant's amended claim 48 reads as follows:

A method of switching an electromagnetic beam, comprising:

transmitting said beam through one or more waveguides; and

switching the walls of said waveguides between high impedance and conductive states to control the propagation of selected modes of said beam,

wherein said electromagnetic beam has one or more polarizations and switching the sidewalls of said waveguides between high impedance and conductive states controls the propagation of said beam.

Claim 48 requires the electromagnetic beam have one or more polarizations and that the sidewalls may be switched between high impedance and conductive states. This allows the mode and the propagation of the beam to be controlled. Kanack discloses a device that can be used to selectively switch transmission lines. Kanack further discloses that the switch may be used to adjust signal properties such as stray capacitance and parasitic resistance. However, Kanack does not disclose, teach or suggest a switch used to control the propagation of a wave which has a certain polarization. The method disclosed in claim 48 allows for a wave with at least one polarization to be transmitted and selectively switched through one or more waveguides. Thus, Kanack does not disclose, teach or suggest all of the limitations of Applicant's claim 48.

For at least the reasons stated above, Applicant respectfully requests the withdrawal of the rejections of claims 1, 31, 32 and 48.

Allowable Subject Matter

The Examiner has stated that claims 49-52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

Applicant has rewritten claims 49-52 in independent form including all of the limitations of the base claim. As such, claims 49-52 are allowable.

CONCLUSION

Claims 1, 31, 32 and 48-52 are in condition for allowance, and Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

  
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